### Alkaline Battery Specifications

**Panasonic Part AM-4PI**

**Chemical System:** Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)

**Designation:** ANSI-24A, IEC-LR03

**Nominal Voltage:** 1.5V

**Internal Resistance:** 0.14 Ohms

**Temperature Range:** -20°C to 54°C (-4°F to 130°F)

**Average Weight:** 11.0 grams (0.38 oz.)

**Volume:** 3.8 cm³ (0.2 in.³)

**Terminals:** Flat

**Shelf Life:** 7 years (80% Capacity)

**Heavy Metals Content:** No added Mercury, Cadmium or Lead

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**IEC/ANSI Standard Tests @ 20°C**

**Remote Control** (24ohm 15spm, 8hpd)

**Tape - Electronic Game** (100mA 1hpd)

**Lighting** (5.1ohm 4mph, 8hpd)

**Photoflash** (600mA 10spm, 1hpd)

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Panasonic Industrial Alkaline Batteries

Panasonic Part AM-3PI

Chemical System: Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation: ANSI-15A, IEC-LR6
Nominal Voltage: 1.5V
Internal Resistance: 0.13 Ohms
Temperature Range: -20°C to 54°C (-4°F to 130°F)
Average Weight: 23 grams (0.8 oz.)
Volume: 8.1 cm³ (0.5 in.³)
Terminals: Flat
Shelf Life: 7 years (80% Capacity)
Heavy Metals Content: No added Mercury, Cadmium or Lead

Dimensions Comply with ANSI Standards

IEC/ANSI Standard Tests @ 20°C

Remote Control (24ohm 15spm, 8hpd)

Radio (43ohm 4hpd)

Lighting (3.3ohm - LIF)

Toy (3.9ohm 1hpd)

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Chemical System: Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation: ANSI-14A, IEC-LR14
Nominal Voltage: 1.5V
Internal Resistance: 0.10 Ohms
Temperature Range: -20°C to 54°C (-4°F to 130°F)
Average Weight: 70 grams (2.47 oz.)
Volume: 26.9 cm³ (1.6 in³)
Terminals: Flat (Recessed Negative)
Shelf Life: 7 years (80% Capacity)
Heavy Metals Content: No added Mercury, Cadmium or Lead

Dimensions Comply with ANSI Standards

IEC/ANSI Standard Tests @ 20°C

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### Alkaline Battery Specifications

**Panasonic Part AM-1PI**

**Chemical System:** Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)

**Designation:** ANSI-13A, IEC-LR20

**Nominal Voltage:** 1.5V

**Internal Resistance:** 0.08 Ohms

**Temperature Range:** -20°C to 54°C (-4°F to 130°F)

**Average Weight:** 141 grams (4.97 oz.)

**Volume:** 55.9 cm³ (3.4 in.³)

**Terminals:** Flat (Recessed Negative)

**Shelf Life:** 7 years (80% Capacity)

**Heavy Metals Content:** No added Mercury, Cadmium or Lead

### IEC/ANSI Standard Tests @ 20°C

**Portable Lighting (2.2ohm LIF)**

<table>
<thead>
<tr>
<th>Duration (Hours)</th>
<th>Voltage (V)</th>
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</thead>
<tbody>
<tr>
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<td>25</td>
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**Radio (10ohm 4h/d)**

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**Toy (2.2ohm 1h/d)**

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</tbody>
</table>

**Portable Lighting (1.5ohm HIF)**

<table>
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<th>Voltage (V)</th>
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<tr>
<td>16</td>
<td>1.2</td>
</tr>
<tr>
<td>20</td>
<td>1.1</td>
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Industrial Alkaline Batteries

Panasonic Part 6AM-6PI

Made in the USA

Chemical System: Alkaline-Zinc/Manganese Dioxide (Zn/MnO2)
Designation: ANSI 1604A, IEC 6LR61
Nominal Voltage: 9.0V
Internal Resistance: 2.76 Ohms
Temperature Range: -20°C to 54°C (-4°F to 130°F)
Average Weight: 45 grams (1.6 oz.)
Volume: 22.8 cm³ (1.39 in³)
Terminals: Snap
Shelf Life: 5 years (85% Capacity)
Heavy Metals Content: No added Mercury, Cadmium or Lead

Dimensions Comply with ANSI Standards

IEC/ANSI Standard Tests @ 20°C

Toy (270ohm 1hp)

Radio (620ohm 2hp)

Smoke Detector, Accelerated Test (10K/620ohm 1sph pulse)

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Alkaline Battery Specifications

9V

Typical Discharge Characteristics With Constant Current At 20°C

Typical Discharge Characteristics With Constant Resistance At 20°C

Typical Temperature Characteristics 5.4 Volts Cutoff Voltage

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